

Amendment to the Specification

Please substitute the following paragraph for the originally filed paragraph found on page 8, line 20 through page 9, line 10.

This conventional template patterning methodology is distinctly different from the current invention. Conventional indirect patterning involves the use of a radiation sensitive photoresist material that is used as a masking layer to apply a defined removal of an underlying layer using an etch process. Here, in the indirect case, a photoresist material acts as an intermediate masking layer, and is useful only for its patterning and masking qualities, but is not useful as a final relief layer. The conventional photoresist, not having the mechanical properties to be useful as a relief layer, is removed once the pattern formed in it has been transferred to the underlying layer. In this manner, any appropriate material that is etchable can be used as the underlayer, being transformed into the relief layer by means of this resist masking, etch and resist removal process. In contrast, disclosed Disclosed herein is the inclusion of use of direct patterning which includes a resist, or patterning, layer that once patterned is not used as an intermediate layer to effect pattern transfer to a second layer. Rather the patterning layer, which is itself radiation sensitive, after it is patterned actually becomes the final template relief structure subsequent to patterning by irradiation and development. This is made possible by judicious use of unique materials which combine the patternable characteristics of a photoresist, with the robust mechanical properties required of a template relief layer. These properties include high adhesive strength to the substrate,

high modulus, high shear strength, and good thermal stability. Materials such as hydrogen silsesquioxane (HSQ) are patternable to a very high resolution and, once cured, form a very stable silicon oxide suitable as a template relief structure for imprinting. Materials with similar characteristics may be substituted for this application for HSQ. However, it should be noted that any such materials which are both irradiation sensitive and patternable, and possess adequate physical properties to behave as a template relief layer are unique and are the heart of this invention.